Sustainability (SUST)

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Graduate Certificate Offered:
Sustainability (non-degree)

Program Description: The Graduate Certificate in Sustainability is interdisciplinary, drawing from faculty and course work across all colleges of the University of Arkansas. The graduate certificate is accessible to all students admitted to the Graduate School, both degree-seeking and non-degree seeking, who wish to pursue advanced study in Sustainability. The purpose of the Graduate Certificate in Sustainability is to provide functional graduate-level knowledge and skills related to the emerging discipline of Sustainability organized around four thematic areas reflecting strength in scholarship of University of Arkansas academic colleges: Sustainability of Social Systems, Sustainability of Natural Systems, Sustainability of Built Systems, and Sustainability of Managed Systems. Students who complete the graduate certificate in Sustainability will be expected to:

1. Articulate commonly accepted definitions of sustainability and discuss various nuances among those definitions as well as engage in analytical thinking to enhance sustainability measures;
2. Address real-world problems of sustainability to reinforce their professional interests.
3. Have an understanding of the interdisciplinary nature of sustainability issues, particularly as they pertain to the thematic areas of knowledge addressed by the graduate certificate (sustainability of natural systems, sustainability of managed systems, sustainability of built systems, and sustainability of human social systems);
4. Be conversant regarding acquisition and analysis of data pertinent to measuring sustainability;
5. Communicate orally, and in writing organized thoughts defining sustainability measures and technical aspects of sustainability;
6. Identify potential strategies to address sustainability issues using appropriate analytical methods and data and provide results of analyses of data using novel sustainability metrics and indicators;
7. Make recommendations, based on data analysis and interpretation, to advance sustainability of individuals or institutions.
8. Develop methods, techniques and tools for implementing sustainability initiatives.

Required Courses

Students must earn a grade of “B” or better for all courses used to fulfill requirements of the Graduate Certificate in Sustainability.

WCOB 5023 Sustainability in Business (Required course for the Graduate Certificate) 3 Hours

Elective courses with sustainability focus selected from a broad menu of offerings in four thematic areas:

- Sustainability of Social Systems
- Sustainability of Managed Systems
- Sustainability of Built Systems
- Sustainability of Natural Systems

Elective courses must be completed in at least two thematic areas. In addition, nine of these 12 hours must be in courses numbered 5000 or above.

A complete list of elective courses may be found on the university’s Sustainability website (http://sustainability.uark.edu/academics/grad-certificate/certificate-courses.php).

Courses

SUST 4603. Environmental Sociology. 3 Hours.
The course provides a social perspective on environmental issues. It examines the linkage between society, ecological systems and the physical environment. It provides conceptual framework(s) for analyzing environmental issues, considers the role of humans in environmental issues, and enhances understanding the complexity of the relationship between societal organization and environmental change. Prerequisite: Junior or senior standing.
This course is cross-listed with HDFS 4603, SOCI 4603.

SUST 4693. Environmental Justice. 3 Hours.
This course deals with the ethical, environmental, legal, economic, and social implications of society’s treatment of the poor, the disenfranchised, and minorities who live in the less desirable, deteriorating neighborhoods, communities, and niches of our country. The class integrates science with philosophy, politics, economics, policy, and law, drawing on award-winning films, current news, and case studies. This course is cross-listed with GEOS 4693.

SUST 5103. Analysis and Design of Resilient Systems. 3 Hours.
Introduces students to complex systems theory, change theory, systems analysis and modeling, and design theory for resilient systems. This course draws theory and heuristics from multiple disciplines, including but not limited to engineering, architecture, ecology, risk assessment, management, social sciences, political sciences, the arts and the humanities.

SUST 5203. Decision Making, Analysis and Synthesis in Sustainability. 3 Hours.
Provides an applied framework for analyzing decision dynamics, supporting and promoting more sustainable decisions, and measuring the sustainability of systems. The course applies theories of change, institutional decision theory, social and institutional constructs of sustainability, indicator and metric development across social, ecological, and economic domains, and communication strategies.

SUST 5303. Sustainable Global Food, Energy and Water Systems. 3 Hours.
Provides a detailed review of the existing global food production/distribution and water systems, with an emphasis on scarcity, equity, management and challenges from changing global systems. This course explores the inputs and efficiencies of existing agricultural production systems, and examines equity and value in these systems.

SUST 590V. Special Problems in Sustainability. 1-6 Hour.
Special Problems is intended to fulfill a need in the sustainability curriculum to offer one-time pilot course work in any semester prior to the formal curriculum approval process, offer seminars on unusual but timely topics in sustainability on a one-time basis, or independent study for students seeking additional expertise in sustainability research and scholarship. Prerequisite: Graduate standing. May be repeated for up to 6 hours of degree credit.